Figure 1: 30 TAC §101.29(b)(3)(B)(ii)

(BER * BA) - (SER * SA) = reduction generated

If SA < BA, then:

(BER * BA) - (SER * BA) = reduction generated

where:

BER = baseline emission rate

BA = baseline activity

SER = emission reduction strategy emission rate

SA = emission reduction strategy activity

Figure 2: 30 TAC §101.29(d)(4)(E)(i)

AE - MSAE = DERCs or MDERCs needed

where:

AE = estimated actual emissions for the use period

MSAE = the most stringent allowable emission level for the use period

Figure 1: 30 TAC §117.570(b)(2)

$$\textbf{ERCs } [\text{RCs}] \text{ (tons per year)} = \sum_{j=1}^{N} \left[ H_j \times (R_{Aj} - R_{Bj}) \times \frac{365}{2000} \right]$$

**or**

$$\textbf{DERCs (tons)} = \sum_{j=1}^{N} \left[ \boldsymbol{H_j \times (R_{Aj} - R_{Bj}) \times \frac{d}{2000}} \right]$$

Where:

| | | |
|---|---|---|
| $j$ | = | each emission unit subject to this section generating RCs |
| $N$ | = | the total number of emission units subject to this section generating RCs |
| $H_j$ | = | actual daily heat input, in million British thermal units (MMBtu) per day, as calculated according to §117.223(b)(1) of this title |
| $R_{Aj}$ | = | the lowest of any applicable federally enforceable emission limitation, the reasonably available control technology (RACT) limit of §117.105 or §117.205(b)-(d) of this title, or the actual emission rate as of June 9, 1993, in pound (lb)/MMBtu, that apply to emission unit *j* in the absence of trading. For units that have been shut down prior to June 9, 1993, the actual emission rate shall be considered to be the average annual emission rate occurring over the period used to define the unit's baseline heat input period in §117.223(g)(3) of this title. |
| $R_{Bj}$ | = | the enforceable emission rate, in lb/MMBtu, for unit *j* established in the registration under subsection **(e)**[(g)] of this section. |
| ***d*** | **=** | **the number of days in the generation period** |

Figure 2: 30 TAC §117.570(c)(1)

**ERCs or MERCS:**

$$\text{New 30-day rolling average emission limit (lb/day)} = \sum_{i=1}^{N} \left[ (H_i \times R_i) + \left( RC_i \times \frac{2000}{365} \right) \right]$$

**or**

**DERCs or MDERCS:**

$$\textbf{New 30-day rolling average emission limit (lb/day)} = \sum_{i=1}^{N} \left[ (H_i \times R_i) + \left( \frac{RC_i \times 2000}{d} \right) \right]$$

Where:

$R_i$, in lb/MMBtu, is defined as in §117.223(b)(1) of this title

$I$ = each emission unit in the source cap

$N$ = the total number of emission units in the source cap

$H_i$ = actual daily heat input, in MMBtu per day, as calculated according to §117.223(b)(1) of this title

$RC_i$ = RC used for each unit, in tons per year **(for ERCs or MERCs) or tons (for DERCs),** generated in accordance with subsection **(b)**[(c)] of this section. If $RC_i$ is from a unit not subject to the emission specifications of §117.105 or §117.205 of this title, this term becomes $Rc_i/F$, where $F$ is the offset ratio for the ozone nonattainment area where the unit is located (e.g. 1.2 for Beaumont/Port Arthur and 1.3 for Houston/Galveston).

***d*** **=** **the number of days in the use period**

and

**ERCs or MERCs:**

$$\text{New maximum daily emission limit (lb/day)} = \sum_{i=1}^{N} \left[ (H_{Mi} \times R_i) + \left( RC_i \times \frac{2000}{365} \right) \right]$$

**or**

**DERCs or MDERCs:**

$$\textbf{New maximum daily emission limit (lb/day)} = \sum_{i=1}^{N} \left[ (H_{Mi} \times R_i) + \left( \frac{RC_i \times 2000}{d} \right) \right]$$

Where:

*I* and *N* are defined as in the first equation in this paragraph

$R_i$, in lb/MMBtu, is defined as in §117.223(b)(1) of this title

$H_{Mi}$ = the maximum daily heat input, in MMBtu/day, as defined in §117.223(b)(2) of this title.

***d*** **= the number of days in the use period**

Figure 3: 30 TAC §117.570(c)(2)

**ERCs or MERCs:** New emission limit for unit i (lb/MMBtu) $= R_{Ai} + \left( \frac{RC_i}{H_{Mi}} \times \frac{2000}{365} \right)$

**or**

**DERCs or MDERCs:** **New emission limit for unit i (lb/MMBtu)** $= \boldsymbol{R_{Ai} + \left( \frac{RC_i}{H_{Mi}} \times \frac{2000}{d} \right)}$

Where:

$i$ = each emission unit subject to this section

$N$ = the total number of emission units subject to this section

$R_{Ai}$ = the lowest of any applicable federally enforceable emission limitation, the RACT limit of §117.105 or §117.205(b)-(d) of this title, or the actual emission rate as of June 9, 1993, in lb/MMBtu, that apply to emission unit *I* in the absence of trading. For units that have been shut down prior to June 9, 1993, the actual emission rate shall be considered to be the average annual emission rate occurring over the period used to define the unit's baseline heat input period in §117.223(g)(3) of this title.

**$d$ = the number of days in the use period**

and

$H_{Mi}$ and $RC_i$ are defined as in paragraph (1) of this subsection.

The appropriate compliance averaging period specified in §§117.105, 117.107, 117.205, or 117.207 of this title shall be assigned to unit *i* using a RC in accordance with the provisions of this paragraph.

Figure 4: 30 TAC §117.570(d)

ERCs: Recalculated **ERC** [RC] (tons per year) $= \sum_{j=1}^{N} \left[ H_j \times \left( R_{Bj} - R_{Aj-new} \right) \times \frac{365}{2000} \right]$

Where:

$j$, $N$, $H_j$ and $R_{Bj}$ are defined as in subsection **(b)(2)**[(c)(2)] of this section

$R_{aj—new}$ = the new $NO_x$ emission specification for unit $j$, in lb/MMBtu

If the recalculated **ERC** [RC] is of zero or negative value, the **ERC** [RC] is determined to be of zero value.